

## EAST Search History

| Ref # | Hits    | Search Query                                       | DBs                             | Default Operator | Plurals | Time Stamp       |
|-------|---------|--|---------------------------------|------------------|---------|------------------|
| S1    | 1       | 10/825,304   | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | ON      | 2006/11/13 16:24 |
| S2    | 1       | ("6480475").PN.                                    | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | OFF     | 2005/10/03 16:52 |
| S3    | 1       | S2 and discrete                                    | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | ON      | 2005/10/03 18:53 |
| S4    | 14      | dummy adj2 bit and discrete adj3<br>multi\$Stone   | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | ON      | 2005/10/04 11:07 |
| S5    | 47082   | quasi  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | ON      | 2005/10/04 08:59 |
| S6    | 1648    | quasi\$7 with rate                                 | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | ON      | 2005/10/04 09:00 |
| S7    | 43      | quasi\$7 adj3 time with rate                       | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | ON      | 2005/10/04 09:00 |
| S8    | 1       | ("6480475").PN.                                    | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | OFF     | 2005/10/29 18:01 |
| S9    | 1       | S8 and (half\$6uniform rate dummy bit<br>quasi\$7) | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | ON      | 2005/10/29 18:05 |
| S10   | 1       | ("20040190551").PN.                                | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | OFF     | 2005/10/29 18:19 |
| S11   | 9582817 | @ad<="19980731"                                    | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | ON      | 2006/11/25 13:05 |
| S12   | 2739033 | @prad<="19980731"                                  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | ON      | 2005/10/29 18:20 |
| S13   | 707369  | @rlad<="19980731"                                  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | ON      | 2005/10/29 18:20 |
| S14   | 9946716 | S11 S12 S13  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | ON      | 2006/05/04 10:09 |
| S15   | 2029    | dummy adj2 bit                                     | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | ON      | 2005/10/29 18:21 |

## EAST Search History

|     |     |  |                                 |    |    |                  |
|-----|-----|--|---------------------------------|----|----|------------------|
| S16 | 13  | dummy adj2 bit and uniform\$6 adj3 rate            | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2005/10/29 18:23 |
| S17 | 11  | S14 and S16  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2005/10/29 18:21 |
| S18 | 2   | S14 and S16 and tone                               | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2005/10/29 18:22 |
| S19 | 314 | dummy and uniform\$6 adj3 rate                     | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2005/10/29 18:23 |
| S21 | 170 | S14 and S19  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2005/10/29 18:24 |
| S22 | 5   | S14 and S19 and (multi-tone tone multi\$3tone)     | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2005/10/29 18:25 |
| S23 | 73  | S14 and S19 and frequency                          | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2005/10/29 18:43 |
| S24 | 0   | uniform adj2 discrete adj3 \$6tone                 | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2005/10/29 18:43 |
| S25 | 0   | uniform adj2 discrete adj3 multi-tone              | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2005/10/29 18:44 |
| S26 | 0   | uniform\$5 adj2 discrete adj3 multi-tone           | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2005/10/29 18:44 |
| S27 | 961 | discrete adj3 multi-tone                           | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2005/10/29 19:07 |
| S28 | 2   | discrete adj3 multi-tone with uniform\$6           | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2005/10/29 18:46 |
| S29 | 13  | bit adj map adj a and bit adj map adj b            | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2005/10/29 18:47 |
| S30 | 8   | S14 and S29  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2005/10/29 18:47 |
| S31 | 18  | discrete adj3 multi-tone and insert\$6 near4 dummy | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2005/10/29 19:09 |

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|     |         |  |                                 |    |     |                  |
|-----|---------|--|---------------------------------|----|-----|------------------|
| S32 | 2       | S31 and S14  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2005/10/29 19:08 |
| S33 | 32      | discrete adj3 multi-tone and insert\$6<br>with dummy       | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2005/10/29 19:09 |
| S34 | 2       | S33 and S14  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2005/10/29 19:09 |
| S35 | 103     | discrete and tone and insert\$6 with<br>dummy              | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2005/10/29 19:09 |
| S36 | 50      | S35 and S14  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2005/10/29 19:10 |
| S37 | 1       | 10/825,304   | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/05/04 09:43 |
| S38 | 1       | ("6480475").PN.  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | OFF | 2006/05/04 10:07 |
| S40 | 10814   | xdsl adsl hdsl sdsl  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/05/04 11:46 |
| S41 | 1995    | discrete adj3 (multi-tone multi adj2<br>tone multi\$5tone) | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/05/04 11:46 |
| S42 | 9584631 | @ad<="19980731"  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/05/04 10:09 |
| S43 | 2743838 | @prad<="19980731"  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/05/04 10:09 |
| S44 | 713220  | @rlad<="19980731"  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/05/04 10:09 |
| S45 | 9956315 | S42 S43 S44  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/05/04 11:46 |
| S46 | 9584631 | @ad<="19980731"  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/05/04 11:46 |
| S47 | 2743838 | @prad<="19980731"  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/05/04 11:46 |

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|     |         |  |                                 |    |    |                  |
|-----|---------|--|---------------------------------|----|----|------------------|
| S48 | 713220  | @rlad<="19980731"  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/05/04 11:46 |
| S49 | 9956315 | S46 S47 S48  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/05/04 11:46 |
| S50 | 10814   | xdsl adsl hdsl sdsl  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/05/04 11:46 |
| S51 | 1995    | discrete adj3 (multi-tone multi adj2<br>tone multi\$5tone)                                       | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/05/04 13:21 |
| S52 | 1469    | S50 and S51  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/05/04 11:47 |
| S53 | 11340   | S50 S51  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/05/04 11:47 |
| S54 | 2040    | S53 and S49  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/05/04 11:47 |
| S55 | 66      | S54 and quasi\$7   | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/05/04 11:48 |
| S56 | 86      | S54 and fext and next  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/05/04 11:49 |
| S57 | 150     | S55 S56  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/05/04 12:34 |
| S58 | 423     | quasi adj3 data  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/05/04 13:19 |
| S59 | 8       | S58 and S51  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/05/04 13:19 |
| S60 | 5       | S59 and S49  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/05/04 13:19 |
| S61 | 110     | discrete adj3 (multi-tone multi adj2<br>tone multi\$5tone) and (half adj2<br>duplex half-duplex) | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/05/04 13:30 |
| S62 | 27      | S61 and S46  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/05/04 13:21 |

## EAST Search History

|     |      |  |                                 |    |     |                  |
|-----|------|--|---------------------------------|----|-----|------------------|
| S63 | 0    | S62 and dummy adj2 bit   | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/05/04 13:22 |
| S64 | 1    | S62 and dummy  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/05/04 13:22 |
| S65 | 4485 | rate with chang\$6 with dynamic\$9   | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/05/04 13:34 |
| S66 | 475  | rate with chang\$6 with dynamic\$9 and<br>(null dummy)   | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/05/04 13:24 |
| S67 | 28   | S66 and S53  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/05/04 13:24 |
| S68 | 4    | S67 and S49  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/05/04 13:26 |
| S69 | 35   | S66 and (half adj duplex half\$2duplex)  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/05/04 13:28 |
| S70 | 0    | S69 and S61  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/05/04 13:28 |
| S71 | 17   | S69 and S49  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/05/04 13:30 |
| S72 | 1    | 10/825,304   | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/11/13 20:04 |
| S73 | 1    | ("6975656").PN.  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | OFF | 2006/11/13 20:12 |
| S74 | 1    | 11/203,474   | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/11/13 20:51 |
| S75 | 7    | ((("5781728") or ("5742527") or<br>("5596604") or ("6747992") or<br>("6714520") or ("6804267") or<br>("6266347"))).PN. | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | OFF | 2006/11/25 12:47 |
| S76 | 5    | S75 and (period cycle) and rate  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/11/25 12:47 |
| S77 | 1    | S75 and (period cycle) and rate and<br>dummy adj2 bit  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/11/25 12:50 |

## EAST Search History

|     |         |   |                                 |    |     |                  |
|-----|---------|---|---------------------------------|----|-----|------------------|
| S78 | 1       | ("6782005").PN.   | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | OFF | 2006/11/25 12:57 |
| S79 | 0       | 09/559,175  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/11/25 12:58 |
| S80 | 275     | Wataru near2 Matsumoto.in. Hidenobu<br>near2 Fukushima.in. Masafumi near2<br>Narikawa.in. | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/11/25 12:59 |
| S81 | 7       | S80 and dummy adj2 bit  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/11/25 13:04 |
| S82 | 5       | rate same dummy adj2 bit same<br>(interference noise) same (cycle<br>period)              | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/11/25 13:05 |
| S83 | 453     | rate and dummy adj2 bit and<br>(interference noise) and (cycle period)                    | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/11/25 13:05 |
| S84 | 9587496 | @ad<="19980731"   | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/11/25 13:06 |
| S85 | 155     | S83 and S84   | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON  | 2006/11/25 13:06 |